

WHAT IS CLAIMED IS:

1 1. A method for configuring a portable and/or mobile host that powers up in a
2 foreign network to connect to the Internet, comprising the steps of
3 creating a bootstrapping agent that works cooperatively with a M-IP home agent to
4 allocate a temporary home address to said portable and/or mobile host,
5 using the M-IP protocol to contact said M-IP home agent and request said
6 bootstrapping agent to allocate said temporary home address to said portable and/or mobile
7 host, and
8 using said temporary home address to create a temporary tunnel between a foreign
9 agent associated with said portable and/or mobile host and said M-IP home agent, wherein
10 said temporary tunnel is used to communicate configuration information including a
11 permanent home address allocated by the DHCP protocol for said portable and/or mobile
12 host to connect to the Internet.

1 2. The method of claim 1 wherein said foreign agent is co-located with said mobile
2 host.

1 3. The method of claim 1 wherein said foreign agent is located on a device that is
2 external to said mobile host and resides in said foreign network.

1 4. The method of claim 1 wherein said bootstrapping agent is arranged to assign IP
2 addresses from an address pool of private addresses.

1 5. The method of claim 4 wherein private addresses are in the format 10.*.

1 6. The method of claim 1 wherein said bootstrapping agent is arranged to assign IP
2 addresses from an address pool of public addresses.

1 7. The method of claim 1 wherein a DHCP client located on said portable and/or
2 mobile host is used to generate messages requesting said configuration information from a
3 DHCP server via said temporary tunnel.

1 8. The method of claim 7 wherein said messages generated by said DHCP client
2 are modified at said portable and/or mobile host to have a format consistent with a DHCP
3 relay.

1 9. A method for enabling a mobile host without an IP home address to connect to
2 the Internet when powering up in a foreign network, comprising the steps of
3 obtaining a temporary IP home address for said mobile host from an IP address
4 source accessible through a mobile IP home agent,
5 establishing a transient tunnel between said mobile IP home agent and a mobile IP
6 foreign agent associated with said mobile host while in said foreign network, using said
7 temporary IP home address,
8 acquiring, via said transient tunnel, configuration parameters including a permanent
9 IP home address from a DHCP server in the home network of said mobile host,
10 replacing said transient tunnel with a new tunnel between said mobile IP home agent
11 and said mobile IP foreign agent using said permanent IP home address.

1 10. A method for enabling configuration of a portable host device that powers up in
2 a foreign network to communicate using the Internet, said method comprising the steps of
3 communicating a temporary home address to said portable host device from a
4 bootstrapping agent operating cooperatively with a mobile IP home agent that serves said
5 portable host device when it operates in said foreign network,
6 establishing a transient bidirectional communication link between said portable host
7 device and said mobile IP home agent using the M-IP protocol and said temporary home
8 address, and

obtaining a permanent address from a DHCP server via said transient bidirectional communication link, wherein said permanent address is used thereafter to configure said portable host to communicate with the Internet.

11. The method defined in claim 10 wherein additional configuration parameters are provided to said portable host device via said transient bidirectional communication link.

12. In a mobile telecommunications system in which a portable and/or mobile host device can operate in a home network that includes a home agent or in a foreign network that includes a foreign agent, a method for configuring said portable and/or mobile host when it powers up in said foreign network, said method comprising the steps of using the M-IP protocol in said portable and/or mobile host as the signaling mechanism for reaching said home network and dynamically allocating a temporary home address; and

thereafter using DHCP with the temporary home address to allocate a permanent home address and other configuration state for said portable and/or mobile host.

13. A method for configuring a mobile host that powers up in a foreign network, comprising the steps of

setting up a temporary IP tunnel via the Mobile IP protocol to connect said mobile host to its home network,

using an IP broadcasting protocol over said temporary IP tunnel so that said mobile host can discover a DHCP addressing server in its home network, and

using the DHCP protocol to communicate addressing and configuration information between said addressing server and said mobile host.

14. In a system arranged to use an IP tunnel to relay via the Internet communication packets that are destined to a mobile host from a home server in said host's home network to a foreign server when said host is in a foreign network, wherein the establishment of said

